In the Claims:

1. (previously presented) A position measuring instrument, comprising:

a periodic incremental graduation comprising a plurality of graduation periods within one measurement range;

a reference marking disposed within said measurement range and integrated with said incremental graduation;

an arrangement of detector elements positioned over at least a length of said measurement range and used for scanning said periodic incremental graduation over at least said length of said measurement range for generating a plurality of periodic scanning signals of which at least one is modified locally by said reference marking and is associated with one of said detector elements; and

an evaluation device that receives said periodic scanning signals, determines a first absolute position within one of said plurality of graduation periods and detects said at least one scanning signal, modified by said reference marking, from said plurality of periodic scanning signals and determines a second absolute position of said reference marking within said length of said measurement range while said at least one scanning signal modified by said reference marking defines one specific location of said one of said detector elements.

2. (original) The position measuring instrument of claim 1, wherein within said measurement range, N graduation periods are disposed, where $N > 1$ and is an integer;

said arrangement of detector elements over said length of said measurement range forms N groups, and each of said N groups of detector elements extends over said length of one graduation period;

within each of said N groups, a plurality of detector elements are spaced apart from one another by a fraction of one graduation period, so that, within one of said N groups, a plurality of periodic scanning signals phase-offset from one another are generated.

3. (original) The position measuring instrument of claim 2, wherein in-phase scanning signals of all of said N groups are added together to form a common summation signal.

4. (previously presented) The position measuring instrument of claim 3, wherein said common summation signal is delivered to an interpolation unit for determining said first absolute position within one graduation period.

5. (previously presented) The position measuring instrument of claim 2, wherein in-phase scanning signals of said N groups are delivered to said evaluation unit, which compares respective in-phase scanning signals with one another and from said comparison said evaluation unit determines one scanning signal for one of said N groups which is modified by said reference marking, and said one of said N groups determines said one specific location of said one of said detector elements within said length of said measurement range.

6. (previously presented) The position measuring instrument of claim 5, wherein said reference marking is an interference in periodicity at one location within one graduation period of said incremental graduation, and in-phase scanning signals, determined as a function of said location of said interference within said one graduation period, of detector elements of said N groups that scan said one specific location within each of said N graduation periods are

compared with one another.

7. (previously presented) The position measuring instrument of claim 5, wherein said respective in-phase scanning signals to be compared with one another for determining said position are determined by said first absolute position that is formed by said interpolation unit.

8. (original) The position measuring instrument of claim 1, wherein said reference marking is a variation of an interstice in a series of equally-spaced markings which forms said incremental graduation.

9. (previously presented) The position measuring instrument of claim 1, further comprising a second reference marker, wherein said length of said measurement range is an integral multiple of the spacing between said reference marking and a second reference marking.

10. (original) The position measuring instrument of claim 1, wherein parallel to and next to said incremental graduation, an absolute code for absolute position measurement is disposed at measurement increments in accordance with said length of one measurement range.

11. (original) The position measuring instrument of claim 10, wherein said absolute code is a single-track sequential code with successive code elements.

12. (currently amended) A method for position measurement, comprising:

scanning a plurality of graduation periods of one incremental graduation by a

detector arrangement comprising a plurality of detector elements and extending over a length of one measurement range, a reference marking being integrated with one of said graduation periods within said length of said measurement range, and generating a plurality of periodic scanning signals, of which at least one of said plurality of periodic signals is locally modified by said reference marking and is associated with one of said detector elements;

determining a first absolute position within one of said graduation periods;

detecting said at least one periodic scanning signal, modified by said reference marking, from among said plurality of periodic scanning signals; and

determining a second absolute position of said reference marking within said length of said measurement range while said at least one scanning signal modified by said reference marking defines one specific location of said one of said plurality of detector elements.

13. (original) The method of claim 12, wherein said scanning results in the generation of a plurality of scanning signals phase-offset from one another within each graduation period of said measurement range.

14. (original) The method of claim 13, wherein scanning signals in-phase with one another in all said graduation periods are added together to form a common summation signal.

15. (previously presented) The method of claim 14, wherein said common summation signal is delivered to an interpolation unit, and said first absolute position within one graduation period is ascertained.

16. (original) The method of claim 13, wherein said scanning signals in-phase with one another are compared with one another, and from said comparison, said scanning signal whose amplitude is modified by said reference marking is determined.

17. (previously presented) The method of claim 15, wherein said scanning signals within one graduation period that are to be compared with one another are determined by said first absolute position.

18. (previously presented) The position measuring instrument of claim 1, wherein each one of said detector elements is assigned to its own corresponding location within said length of said measurement range and said second absolute position of said reference marking determined by said evaluation device is one of said corresponding locations of said detector elements within said length of said measurement range.

19. (currently amended) The method of claim 12, ~~wherein said detector arrangement comprises a plurality of detector elements,~~ wherein each one of said plurality of detector elements is assigned to its own corresponding location within said length of said measurement range, and said second absolute position of said reference marking is one of said corresponding locations of said plurality of detector elements within said length of said measurement range.